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Bibliographical Notes on well known Plants.—III.

BY EDWARD L. GREENE.

NYMPHÆA and NUPHAR.

By a very great majority of botanists, taking the past along with the present, these two genera have been confounded. Pond-lilies, white-flowered and yellow-flowered, have been known from the remotest antiquity, and both were called *Nymphæa* by the Greeks and Latins of old. In all the ponderous folios and quartos of the sixteenth, seventeenth and eighteenth century botany, as well as in several of the very front rank of authors in the earliest decade of our own century, we find *Nymphæa* still undivided, and embracing all the known species of water lilies, whether white or yellow-flowered. Until about eighty years ago, *Nymphæa alba*, a binary name still in use for a certain European plant, included several of our nymphæas, and *Nymphæa lutea* covered an equal number of our nuphars. The fact that Brunfels, as long ago as the year 1534, proposed for these plants the Arabic name *Nenufar*, in place of the Greek *Nymphæa*, is worth mentioning only because it is about the first appearance of the name at present accepted for the yellow pond-lilies. He had not a thought of distinguishing here two genera.

It is not strange that Linné did not separate them; because the faculty for generical discrimination was not among the elements which combined to make his greatness. In this regard, there were not many among his contemporaries or immediate forerunners who did not excel him. Some of the Linnæan genera are pretty nearly co-extensive with natural orders as now everywhere received. Yet A. L. de Jussieu (1789), and even Joseph Gärtner (1791), that masterly botanist who, in analytical power, surpassed all his predecessors, and whose great work, *De Fructibus et Seminibus Plantarum*, marked the beginning of a new era in the history of genera, still left the old genus *Nymphæa* undivided. It might well at the present day raise a doubt,

and move one to make a new and careful investigation of the characters of *Nuphar*, this circumstance, that none were discerned by Tournefort, Plumier, Dillen, Micheli, Vaillant, Linné, Haller, Adanson, Jussieu, Jacquin, Mönch or Gärtner. When all these and other celebrated men of that splendid epoch had failed to perceive that the so-called yellow pond-lilies were of a different genus from the white, it is, if true, somewhat remarkable that a man so little above mediocrity in point of talent as Sir J. E. Smith, should have been the one to distinguish them. But that it was he is what all our books now seem to say; for *Nuphar* is everywhere credited to Smith, who published it in Sibthorp's *Flora Græca* in 1806. That the genus is entirely valid we may well believe from this, that ever since its promulgation, now eighty years ago, it has been approved by all authorities, even finding ready acceptance with that celebrated contemporary writer upon genera, Professor Baillon, who is so little disposed to admit genera with weak characters, that he remands *Negundo* to *Acer*, *Coptis* to *Helleborus*, and writes *Aconitum* as doubtfully distinct from *Delphinium*. As for the author to whom should be accorded the honor of having separated these two water-lily genera aforetime confounded, I venture to express a doubt that it is Smith. Such a fine piece of generical discrimination seems far less likely to have emanated from that plodding conventionalist, than from the penetrating and analytical mind of his gifted rival, Salisbury. It was the latter who took the water-lilies out of the *Papaveraceæ*, where they had been placed by the elder Jussieu, and founded on them the new natural order, *Nymphæaceæ*, at the same time separating generically the white from the yellow-flowered kinds. It is certain that a portion of this work was published prior to the appearing of Smith's *Nuphar*; perhaps all of it was; for there is apparently some doubt as to whether the part of Kœnig and Sim's *Annals* containing Salisbury's dissertation is of the date 1805 or 1806. This work must now be rare, and I have not seen it. But the plate in the *Paradisus Londinensis*, bearing the figure and the name of Salisbury's *Castalia magnifica*, was published in October, 1805, and this plate alone would almost or altogether establish a generical priority. If the corresponding pages of the *Annals* also

appeared in 1805, then beyond all question Smith's *Nuphar* must pass into synonymy, and Salisbury's *Castalia* obtain the place to which priority would entitle it. It must be left to some one whose library facilities exceed mine to settle this question of the dates of publication. As I have intimated above, I am suspicious that in the matter of these water-lily genera, we have another instance of that discreditable treatment of Salisbury's genera and species, with which British botanists both of his own and later times are chargeable.*

The uncritical reader will perchance infer from what I have been saying, that Smith's *Nuphar* and Salisbury's *Castalia* are synonymous, which is not the case; for the last-named author kept the classical name *Nymphæa* for the yellow-flowered, or nuphar species, and this with good reason. It was very likely these plants to which *Nymphæa* was first applied. Then, for the more showy red and white and blue-flowered genus he proposed the new and beautiful name, *Castalia*; one which I judge, from all I am able to gather out of the books to which access is afforded me, will have to be restored.

I must not conclude this note without pausing to qualify one general statement made at the outset. It is not true that every one of the pre-Linnæan botanists confused the two genera herein discussed. They were accurately defined and separately named eighty-five years before either Salisbury or Smith took them in hand, and that by the very celebrated author, Boerhaave (1720). He seemed to know that it was to the homely yellow-flowered plants (our nuphars) that the name *Nymphæa* belonged, and so he left it to designate that group; hence Salisbury, in doing the same thing, no doubt purposely followed him. For our nymphæas (*Castalia*, as Salisbury called them), he coined the name *Leuconymphæa*. Luckily for us who all will prefer the easy and graceful *Castalia* to the lumbering *Leuconymphæa*, Boerhaave's priority goes for naught; inasmuch as it is prior to Linné; but the credit of seeing the two genera in what all before him had called one, and of clearly bringing out their several distinguishing points belongs to him, and not to any lights of this more favored and more boastful age.

* See Journal of Botany, xxiv, 49 and 296.